

MODIS IOT Weekly Report

Mission Operations Days: 2000/169 to 2000/175

June 16, 2000 20:00:00 GMT to June 23, 2000 20:00:00 GMT

Terra Spacecraft and MODIS Instrument Status:

Terra (AM-1) is in Normal Mode

MODIS is in Science Mode

MODIS has an anomaly with the LWIR focal plane. See description below.

Blackbody	A On; B Off	Nominal
Calibration Electronics	A On; B Off	Nominal
Control Processor	A On; B Off	Nominal
Door: Nadir	Unlatched, open	Nominal
Space View	Unlatched, open	Nominal
Solar Diffuser	Unlatched, closed	Nominal
FDDI Formatter	A On; B off	Nominal
FIFO Memory	1 & 2 On; 3 & 4 Off	Nominal
Format Processor	A On; B off	Nominal
PC FPA	A On	Nominal
Power Supply: 1	On	Nominal
2	Off	Nominal
PV FPAs: VIS	A On	Nominal
NIR	A On	Nominal
SMIR	A On	Nominal
LWIR	A On	Nominal
Radiative Cooler:		
Outgas Heaters	Off	Nominal
LWIR FPA Heater	On	Nominal
SMIR FPA Heater	Off	Nominal
Scan Assembly	A On; B off	Nominal
SDSM	Off	Nominal
SRCA	Off	Nominal
Survival Heaters: PS1	Enabled	Nominal
PS2	Enabled	Nominal
Timing Generator	A On; B Off	Nominal
Flight Software	Rev BD	Nominal
Inhibit Ids Set	None	Nominal
TMONs enabled	66,67	Nominal

This Week's Completed MODIS Activities:

Saturday, June 17, 2000

None

Sunday, June 18, 2000

None

Monday, June 19, 2000

171/07:38:57 ATC OA15 SD/SDSM Open

171/09:17:50 ATC OA16 SD/SDSM Screened

171/20:02:00 ATC - Blackbody to 270K

Tuesday, June 20, 2000

172/14:00:00 ATC Blackbody to 315K

172/13:55 Real-time Set Blackbody duty cycle to 100%

172/21:00:00 ATC Blackbody to 270K

172/21:00 Real-time Set Blackbody duty cycle to 33%

Wednesday, June 21, 2000

173/09:15:26 ATC OA16 SD/SDSM Screened

173/18:42 Real-Time - Set SMIR Itwk / Vdet to 79 / 190

173/19:00:00 ATC Blackbody to 290K

173/19:05:48 ATC Load - OA25: SRCA 1W Spatial w/Sector Rotation, the BC and ND Filter

173/20:42:48 ATC Load - OA25: SRCA 10W Spatial w/ Sector Rotation and Spectral Slit,
the BC and ND Filter

MODIS Roll Sequence #1 (21:41:30 - 22:03:00)

173/21:34:21 ATC Load - Set Formatter to Night Rate 00:03:15 early (for 50/50 SSR buffer)

173/21:50:10 ATC Load - Set Formatter to Day Rate (for Lunar Roll)

173/21:50:12 ATC Load - Set SCIABNORM Flag to ABNORM

173/21:50:14 ATC Load - PC DC Restore OFF

173/21:50:16 ATC Load - PV DC Restore OFF

173/21:50:18 ATC Load - Sector Rotation to -3072 (EA to SV and OBCs)

173/21:56:32 ATC Load - Sector Rotation to 0 (Normal)

173/21:56:34 ATC Load - PC DC Restore ON

173/21:56:36 ATC Load - PV DC Restore ON

173/21:56:38 ATC Load - Set SCIABNORM Flag to NORM

173/21:56:40 ATC Load - Set Formatter to Night Rate (for Lunar Roll)

173/22:30:18 ATC Load - Set Formatter to Day Rate 00:03:15 late (for 50/50 SSR buffer)

MODIS Roll Sequence #2 (23:20:15- 23:41:04)

173/22:42 Real-Time - Set SMIR Itwk / Vdet to 110 / 226

173/23:13:14 ATC Load - Set Formatter to Night Rate 00:03:15 early (for 50/50 SSR buffer)

173/23:28:43 ATC Load - Set Formatter to Day Rate (for Lunar Roll)

173/23:28:45 ATC Load - Set SCIABNORM Flag to ABNORM

173/23:28:47 ATC Load - PC DC Restore OFF

173/23:28:49 ATC Load - PV DC Restore OFF

173/23:28:51 ATC Load - Sector Rotation to -3072 (EA to SV and OBCs)

173/23:35:05 ATC Load - Sector Rotation to 0 (Normal)

173/23:35:07 ATC Load - PC DC Restore ON

173/23:35:09 ATC Load - PV DC Restore ON
173/23:35:11 ATC Load - Set SCIABNORM Flag to NORM
173/23:35:13 ATC Load - Set Formatter to Night Rate (for Lunar Roll)

MODIS Roll Sequence #3 (00:58:59- 01:19:37)

174/00:09:11 ATC Load - Set Formatter to Day Rate 00:03:15 late (for 50/50 SSR buffer)
174/00:18 Real-Time - Set SMIR Itwk / Vdet to 100 / 218
174/00:52:07 ATC Load - Set Formatter to Night Rate 00:03:15 early (for 50/50 SSR buffer)
174/01:07:16 ATC Load - Set Formatter to Day Rate (for Lunar Roll)
174/01:07:18 ATC Load - Set SCIABNORM Flag to ABNORM
174/01:07:20 ATC Load - PC DC Restore OFF
174/01:07:22 ATC Load - PV DC Restore OFF
174/01:07:24 ATC Load - Sector Rotation to -3072 (EA to SV and OBCs)
174/01:13:38 ATC Load - Sector Rotation to 0 (Normal)
174/01:13:40 ATC Load - PC DC Restore ON
174/01:13:42 ATC Load - PV DC Restore ON
174/01:13:44 ATC Load - Set SCIABNORM Flag to NORM
174/01:13:46 ATC Load - Set Formatter to Night Rate (for Lunar Roll)
174/01:19:37 MODIS Lunar Roll #3 (End)
174/01:48:05 ATC Load - Set Formatter to Day Rate 00:03:15 late (for 50/50 SSR buffer)
174/01:51:29 ATC Load - OA25: SRCA 1W Spatial w/Sector Rotation, the BC and ND Filter
174/03:25:48 ATC Load - OA25: SRCA 10W Spatial w/Sector Rotation and Spectral Slit,
the BC and ND Filter

Thursday, June 22, 2000

174/04:25 Real-Time - Set SMIR Itwk / Vdet to 110 / 226
174/19:35 Real-Time – Set Inhibit ID 33 for CP commands to prevent door macros from
executing.
174/20:00 Real-Time – Set Inhibit ID 53 for SD/SDSM commands to prevent SDSM from
turning on.

This Week's Scheduled MODIS Activities Not Completed:

175/22:04:12 ATC OA16 SD/SDSM Screened

Door and SDSM activities were inhibited while anomaly resolution continues.

Upcoming MODIS Events:

Saturday, June 27, 2000

None

Sunday, June 25, 2000

None

Monday, June 26, 2000

178/20:02:00 ATC - Blackbody to 270K

Tuesday, June 27, 2000

179/14:00:00 ATC Blackbody to 315K

179/14:?? Real-time Set Blackbody duty cycle to 100%

179/21:00:00 ATC Blackbody to 270K

179/21:?? Real-time Set Blackbody duty cycle to 33%

Wednesday, June 28, 2000

180/19:00:00 ATC Blackbody to 290K

Thursday, June 29, 2000

None

Friday, June 30, 2000

None

Maneuvers:

Tue, June 20, 2000 – Drag Makeup Maneuver

Wed, June 21, 2000 – MODIS Roll #1 (2000/173/21:50:10 – 21:56:40), roll degree = -18.0044

Wed, June 21, 2000 – MODIS Roll #2 (2000/173/23:28:43 – 23:35:13), roll degree = -17.4518

Wed, June 21, 2000 – MODIS Roll #3 (2000/174/01:07:16 – 01:13:46), roll degree = -16.9070

MODIS Anomalies:

MODIS appears to have stopped controlling on the LWIR Focal Plane. Analysis is underway. Solar Diffuser Door operations are suspended during this analysis.

General Instrument Comments:

MODIS is in Science Mode on the A-side with the SVD and NAD open.

MODIS Telemetry Trends:

See MODIS Anomalies section.

Non-MODIS Significant Events:

None. The DMU (Drag Make-Up Maneuver) and the MODIS Roll maneuvers were nominal.

Limited Life Item Status:

SRCA 10W Lamp #1: 167.2 of 500 hours

SRCA 10W Lamp #2: 132.7 of 500 hours

SRCA 10W Lamp #3: 141.9 of 500 hours

SRCA 10W Lamp #4: 61.5 of 500 hours

SRCA 1W Lamp #1: 555.1 of 4000 hours

SRCA 1W Lamp #2: 276.3 of 4000 hours

Solar Diffuser Door: 1381 of 3022 Movements

Nadir Aperture Door: 532 of 1316 Movements

Space View Door: 437 of 1316 Movements